



PROJECT PHASE 1

Current State of Adaptation Focused Course Offerings

MAY 2019

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1.0 Gap Analysis Summary Report

As part of the Adaptation Learning Network project, we conducted a gap analysis in order to identify what relevant courseware was already available either through the participating Professional Associations, or the participating Post-Secondary Institutions (PSI's). The gap analysis was limited to offerings in BC from January 2018 onward, that were advertised between January 4 and May 12, 2019. These included online courseware that were published prior to 2018 and were still available. The analysis included only the seven participating professional organizations and the seven participating post-secondary institutions. Many professional organizations had links to post-secondary institutions, commercial CPD providers, and other professional associations that may or may not have offerings; these were not explored or included.



2.0 Methods & Scope

PROFESSIONAL ASSOCIATIONS

For this gap analysis, we searched the websites of the seven participating professional organizations for courses and events that included climate change adaptation-related content. Such content included explicit references to climate change and adaptation, but also resilience, renewable energy, green infrastructure, and other topics that are known by climate experts to be necessary elements for climate change adaptation. Courses with climate mitigation and low carbon resilience content were also included. Sustainability references were carefully examined to determine whether these were aligned with the aforementioned themes. Courses in and about BC, and courses in BC but about geographies outside of the province were included. Courses and events were typically listed on professional education or continuing education pages. We did not examine whether the organizations' divisions or branches had additional listings of courses or events.

PROFESSIONAL ASSOCIATION MEMBERSHIP

As part of the overarching gap analysis we conducted a survey with members of the participating professional associations. The survey focused on questions related to their knowledge and understanding of climate change and climate adaptation, their sense of the relevance of climate adaptation to their professional practice, and questions related to their interest in continuing professional development (CPD) training, and their thoughts on priorities for the focus and style of CPD training in climate adaptation. The survey included both close ended (quantitative, Likert style questions) and open-ended questions. We

had a great response from the members of various associations, totaling over 750 responses. Given this response, we are still in process with our analysis of the results and so have not included these in this summary. We will be sharing the results of the survey on our project website when the analysis is complete.

POST-SECONDARY INSTITUTIONS

A similar process was used to find courses and events on the websites of the seven participating post-secondary institutions, with a focus on continuing education, professional education, and community education. We did not examine university for credit (i.e., degree) programs and their courses for climate change content. There were several notable sources for climate education: [Adaptation to Climate Change Team \(ACT\)](#) at Simon Fraser University (SFU), [Pacific Climate Impacts Consortium](#) at University of Victoria, and [Pacific Institute for Climate Solutions](#) – which is hosted and led by University of Victoria in collaboration with SFU, UBC, and University of Northern BC (UNBC).

3.0 Additional Resources

As part of the gap analysis, additional information and links to other resources were identified through the Professional Association websites (e.g., Engineers and Geoscientists BC). These included climate change advisory groups, climate change/adaptation position papers, surveys and information portals. These were not included as part of the analysis process but have been noted in a database for potential follow up.

Examples include:

[Climate Change Information Portal](#) with subheadings for:

- Design Flood Hydrology
- Vulnerability Risk Assessment
- Resources for Buildings Sector
- Compilations of CC Information
- Historic Climate Data
- Introduction to CC and CCA
- CC Adaptation Guidelines (e.g., BC MoE Sea Dikes and Coastal Flood Hazard Land Use, NYC Climate Resiliency Design Guidelines)
- Adaptation Case Studies (e.g., BCMOTI/ Nodelcorp/PCIC CC Engineering Vulnerability Assessment of 3 BC Highway Segments)
- Projected Climate Data
- Adaptation Decision-making – tools and resources to communicate the results of vulnerability risk assessments so they may effectively incorporate CCA into decision-making processes (e.g., American Society of Civil Engineers – Adapting Infrastructure and Civil Engineering Practice to a Changing Climate; Canadian Institute of Planners – CCA Planning: A handbook for small Canadian communities)



5.0 Continuing Professional Development Requirements

In addition to identifying existing courseware, we examined what qualifies as CPD for participating professional organizations, including whether such training is mandatory. There was a broad range of requirements ranging from completely voluntary to specific requirements.

The outcome of this part of the analysis is not included in this summary report however, will be considered in the design and development of the courseware for this project.

There is also recognition of the changes to the [Professional Governance Act](#) and the implications of these changes for CPD; however this was not the focus of the gap analysis and is not addressed in this report.



5.0 Current State of Adaptation-Focused Course Offerings

The gap analysis identified 126 relevant (or potentially relevant) courseware offerings accessed from professional organization websites, and 90 relevant (or potentially relevant) courseware offerings accessed from post-secondary institutions, and climate adaptation/climate science organizations associated with PSIs such as Simon Fraser University's Adaptation to Climate Change Team (ACT), and University of Victoria's Pacific Climate Impacts Consortium (PCIC) and Pacific Institute for Climate Solutions (PICS). The courses identified through this gap analysis have been grouped together under general topic headings in the section below.

It was worth noting that there were a number of courseware offerings that did not emphasize climate change adaptation (CCA) although there appeared to be clear relevance and links between CCA and the central topic of the course. A deeper analysis of the curriculum in these courses may reveal information about adaptation but was beyond the scope of this analysis. These are provided in a list following the tables outlining the courses on offer through Professional Associations and PSIs.

Other courses were identified that did not specifically mention key words (e.g, climate, resilience, etc.), but again may be relevant based on the presenter bios (e.g., Erosion and Sediment Control (EGBC, October 11, 2018); Developments in Tsunami Hazard Analysis: Wave and Inundation Modeling (EGBC, April 5, 2018). Finally, there were also courses that did not focus on climate change but included or may include resources that would be beneficial for climate change adaptation (e.g., EGBC's West Coast Oil Spill Response and Strategies in Port Alberni on April 5, 2018 included coastal mapping and protection strategies for coastal areas).

6.0 Adaptation Education Accessed from Professional Organization Websites

CLIMATE CHANGE MITIGATION/LOW CARBON RESILIENCE

1. ASTTBC, Relevance of Green Resilience Strategies to Professional Practice
2. EGBC, Relevance of Green Resilience Strategies to Professional Practice

ENERGY

3. ASTTBC, Solar Energy, Kamloops
4. ASTTBC, Solar Energy, Vancouver
5. EGBC, AGM & Keynote Presentation: The Paradox of Energy Efficiency
6. EGBC, Environmental Benefits of District Energy Heating & Renewable Energy in BC
7. EGBC, Evening Seminar: CNC Machining, AL, Clean Energy & Cyber Security
8. EGBC, Professional Practice Guidelines: Whole Building Energy Modelling
9. EGBC, Solar Energy, Kamloops
10. EGBC, Solar Energy, Vancouver
11. EGBC, State of the Art Modeling & Model Validation of Renewable Energy Systems
12. EGBC, Technical Talk: Clean Energy Generation
13. EGBC, The BC Energy Step Code

AGRICULTURE

14. BCIA, 4-Part BC Agriculture & Climate Change Series

FORESTS

15. ABCFP, 2019 Conference
16. ABCFP, BC Community Forest Association 2019 Conference - Adapting to a Changing Climate
17. ABCFP, Climate Change Adaptation - Mycorrhizae to mushrooms & moose: Effects of climate change on a multi-trophic scale
18. ABCFP, Climate Change Adaptation - Urban forestry adaptation to climate change
19. ABCFP, Managed Forests & a Changing Climate
20. ABCFP, Ten Emerging BC Forest Initiatives
21. ABCFP, Timber Supply Projections Adaptation - Government Actions
22. ABCFP, Timber Supply Projections Adaptation - Industry Actions
23. ABCFP, UNBC: Ecological Field Data Collection
24. BCIA, Winter Webinar Series: Conservation in the Context of Climate Change - Restoration in Action: Whitebark Pine Restoration, Wetland Restoration in the Kootneys, Riparian & Wetland Restoration in the Slocan Valley, Rocky Mountain Trench Ecosystem Restoration Program



GENERAL

- 25. CAB, 2019 AGM & Conference
- 26. PIBC, Getting Climate Ready: Future Climate in the North Okanagan
- 27. PIBC, Getting to Know the Guides & Toolkits for Sustainable Land & Water Use
- 28. PIBC, What's Climate Got to Do With It?

HEALTH

- 29. PIBC, SHIFT Collaborative - Making the Links: Climate Change, Community Health & Resilience

INFRASTRUCTURE

- 30. EGBC, Climate Change & Resources Roads: Summary of three risk and vulnerability case studies
- 31. EGBC, Climate Change on Vancouver Island & Coastal BC
- 32. EGBC, Developing CC-Resilient Designs for Highway Infrastructure in BC: Professional Practice Guidelines, Kelowna
- 33. EGBC, Developing CC-Resilient Designs for Highway Infrastructure in BC: Professional Practice Guidelines, Prince George
- 34. PIBC, Vancouver's Mobility Future: Automating Policy into Sustainable Results

MODELING

- 35. CAB, State-and-transition simulation modeling of landscape dynamics using ST-SIM

MULTI-FACETED

- 36. ABCFP, BC Land Summit - Deep Dive 101 - Fire Ecology & Urban Interfaces: Living Within Fire Dependant Ecologies; Deep Dive 02 - Changing Climate, Changing Coast: Building Resilience and Reducing Disaster Risk in BC Marine
- 37. ASTTBC, #BCTechSummit: The Reality Revolution - CAS, The Future of Food, Digital Government/ Procurement Concierge Challenges, Local Innovations that are Powering Global Sustainable Growth, Cleantech Challenges
- 38. ASTTBC, BC Land Summit
- 39. BCIA, Adaptation Canada 2020: Conference on CCA
- 40. BCIA, BC Land Summit
- 41. BCIA, Keeping up with Environmental Change 2019 (annual) Workshop
- 42. BCIA, Retooling for Climate Change
- 43. BCSLA, 151 Continuing Education and Life[long] Learning Ideas for BC Landscape Architects (2018)
- 44. BCSLA, BC Land Summit
- 45. CAB, BC Land Summit
- 46. CAB Keeping up with Environmental Change 2019 (annual) Workshop
- 47. EGBC, BC Land Summit
- 48. EGBC, Challenges & Opportunities for Sustainability in the Lower Mainland
- 49. EGBC, Sustainability in Engineering & Geoscience
- 50. PIBC, BC Land Summit

OTHER

51. ASTTBC, 2019 AGM, Conference & Technology Awards Luncheon: Shaping the Future Together
52. ASTTBC, 2019 CSLA Annual Conference - CSLA Committee on Climate Adaptation meeting
53. ASTTBC, Risks & Opportunities for Engineers & Geoscientists in a Changing Climate
54. BCIA, Adapting to Climate Change, 2017 AGM
55. BCIA, Bettering Environmental Stewardship & Technology Conference (BEST 2019)
56. BCIA, European Institute of Innovation & Technology (EIT) Climate-KIC (Knowledge & Innovation Community)
57. BCSLA, 2019 CSLA Annual Conference - CSLA Committee on Climate Adaptation meeting
58. CAB, 2019 AGM, Conference & Technology Awards Luncheon: Shaping the Future Together
59. CAB, Bettering Environmental Stewardship & Technology Conference (BEST 2019)
60. CAB, EGBC Annual Conference & 100th AGM
61. EGBC, Annual Conference & 100th AGM
62. EGBC, Navigating Complexity Webinar
63. EGBC, Risks & Opportunities for Engineers & Geoscientists in a Changing Climate
64. PIBC, Advancing Collaborative Climate Change Adaptation in BC
65. PIBC Climate Services in the Private Sector: Integrated climate services into on -the-ground decision making

PLANNING

66. BCIA, Webinar: Planning for Resilience and Reconciliation in the Face of a Changing Climate
67. CAB, Webinar: Planning for Resilience and Reconciliation in the Face of a Changing Climate
68. PIBC, 10th Annual SCARP Symposium: Encompass: Resilience Planning for the Social Implications of CC
69. PIBC, BCPRA Annual Symposium Conference: Making it Matter - Parks & Other Public Space: Creating Vibrant & Healthy Communities for All
70. PIBC, 2018 Annual Conference: The Game Plan! - The Changing Climate of Planning Policy: A More Sustainable & Resilient Framework, Climate Action - Mandate MashUp, Step-ing it Up! A Chance to Grill Planners Who Have Adopted the Energy Step Code, etc.

RESTORATION

71. BCSLA, 40th Annual Professional Biology Conference and AGM - Building Literacy on Climate Resilience in the Okanagan, Restoring ecosystems in a burning province: Can the damage be reversed?
72. BCSLA, ER505: Climate Change in Ecological Restoration
73. CAB, 40th Annual Professional Biology Conference and AGM - Building Literacy on Climate Resilience in the Okanagan, Restoring ecosystems in a burning province: Can the damage be reversed?
74. PIBC, Ecosystem Design Through Propagation of Native Plants
75. PIBC. ER505: Climate Change in Ecological Restoration



SPECIES

76. CAB, Salmonid Enhancement Program Community Workshop - 2019 "Life in the Salmonsphere"

URBAN

77. ABCFP, SFU: Natural Assets and Climate Change Resiliency
78. ASTTBC, EcoCity World Summit 2019 - urban design, bio geo physical conditions, socio-cultural features, ecological imperatives
79. BCIA, EcoCity World Summit 2019
80. PIBC, 2018 Asset Management BC Annual Conference: Competing Priorities in a Changing World
81. PIBC, Climate Change in the Urban Environment: Essential Steps to Enabling Resiliency
82. PIBC, EcoCity World Summit 2019
83. PIBC, Natural Assets and Climate Change Resiliency
84. PIBC, Toward a Resilient BC: Implementing Strategies to Reduce Natural Hazard Risk in BC's Built Environment

WATER

85. ABCFP, Fraser Watershed Restoration Conference 2019
86. ABCFP, Regulated Rivers II: Science, Restoration, and Management of Altered Riverine Environments - Effects of climatic and flow-path modification on water quality in the upper Columbia Basin
87. ASTTBC, Wastewater Management Association of BC 2019 Convention
88. ASTTBC, Fraser Watershed Restoration Conference 2019

89. ASTTBC, Urban Watershed Planning
90. ASTTBC, Introduction to hydrogeology and groundwater management
91. BCIA, Fraser Watershed Restoration Conference 2019
92. BCIA, Regulated Rivers II: Science, Restoration, and Management of Altered Riverine Environments - Effects of climatic and flow-path modification on water quality in the upper Columbia Basin
93. BCIA, Wetland Conference & events *Cumberland* by BC Wildlife Federation - keynote Loys Maingnon; Water and Ice: Geology and hydrology of the Cumberland wetlands
94. BCSLA, Second Annual Vancouver Island Symposium on Water Stewardship in a Changing Climate
95. CAB, Second Annual Vancouver Island Symposium on Water Stewardship in a Changing Climate
96. CAB, Regulated Rivers II: Science, Restoration, and Management of Altered Riverine Environments - Effects of climatic and flow-path modification on water quality in the upper Columbia Basin
97. EGBC, Design Flood Hydrology for BC Natural Resource Professionals
98. EGBC, Professional Practice Guidelines for Flood Mapping in BC
99. EGBC, Coastal Hazards and Sea Level Rise Seminar
100. EGBC, Webinar: Watersheds in Four Dimensions
101. EGBC, Hydrologic Modelling with the Raven Framework
102. EGBC, Coastal Hazards and Sea Level Rise Seminar



103. EGBC, Aspects of Flood Management in BC
104. EGBC, Advanced Stormwater Management
105. EGBC, Climate Change and Water Management Seminar
106. EGBC, Urban Watershed Planning
107. EGBC, Introduction to Hydrogeology and Groundwater Management
108. EGBC, BCWWA Annual Conference: The Rise of Water, keynote Angry Planet host George Kourounis
109. PIBC, Rising Waters: Floodplain Management in the Lower Mainland
110. PIBC, Planning and Building for Regional Flood Resilience
111. PIBC, Second Annual Vancouver Island Symposium on Water Stewardship in a Changing Climate
112. PIBC, Second Annual Vancouver Island Symposium on Water Stewardship in a Changing Climate
- WILDFIRE**
113. ABCFP, Wildfire adaptation - Modification of forest management practices for wildfire adaptation
114. ABCFP, WCC Spring 2019: Firesmart in BC; Identifying Barriers to Community Action; Effectiveness of Fuel Treatments; Wildfire Risk Reduction in National Parks
115. BCIA, Landscape and Community Scale Wildfire Risk Reduction for Whistler, BC
116. BCIA, Webinar: FireSmart in BC
117. CAB, Landscape and Community Scale Wildfire Risk Reduction for Whistler, BC
118. CAB, Webinar: FireSmart in BC
119. CAB, Webinar: Identifying Barriers to Community Action - Learning from Wildland-Urban Interface Disasters in the Past
120. CAB, Webinar: Effectiveness of fuel treatments in mitigating wildfire severity - lessons from large wildfire events in the interior Pacific NW

7.0 Adaptation Education Accessed from Post Secondary Institutions Websites

CLIMATE CHANGE MITIGATION & LOW CARBON RESILIENCE

1. SFU, Low Carbon Resilience and BC Professional Associations Webinar
2. UVic, Evaluating our Climate Policy Options for Accelerating GHG Reduction
3. UVic, Health Impacts of Heat: Adapting to a Changing Climate

ENERGY

4. SFU, Renewable Energy Transition Strategies
5. UVic, 100% Renewable Energy Communities: Lessons From Germany With Dr. Manfred Fishedick
6. UVic, 100% Renewable Transit: Seattle and Vancouver
7. UVic, PCIC, PICS, Awesome Potential: Airborne Wind Energy's Opportunities And Challenges
8. UVic, Carbon Pricing 2.0: Lessons From California And BC
9. UVic, Mathematical Sciences & Clean Energy Applications - A PICS Supported Workshop
10. UVic, Renewable Natural Gas - Unlocking Local Government Potential In BC

AGRICULTURE

11. UVic, Northern Agriculture and Climate Change Research Forum
12. UVic, The Psychology of Change: Achieving a Transformation of the Global Food System

FORESTS

13. UVic, ER328: Forest Restoration and Sustainable Forestry

GENERAL

14. SFU, Can We Avoid A Climate Catastrophe?
15. SFU, Climate Change? Yawn. It Hasn't Affected Our Lives Yet, So Why...
16. UVic, Weather And Climate On Vancouver Island

INFRASTRUCTURE

17. SFU, A Regional Approach to Biodiversity-Led Green Infrastructure
18. SFU, Next-Generation Transportation Certificate
19. UBC, Urban Systems
20. UVic, Bioenergy: Opportunities and challenges of harnessing waste to reduce GHGs
21. UVic, Hammers and Nails: Strategies for Addressing Climate Change in BC Communities
22. UVic, PCIC, PICS, Infrastructure for a low-carbon planet
23. UVic, New energy and mobility futures with Ethan Zindler
24. UVic, Prefab Wood Construction: Meeting B.C.'s ambitious energy, climate and economic objectives
25. UVic, PCIC, PICS, Reducing climate impacts in industrial buildings Modelling



MODELING

26. UVic, A climatology of mechanisms that generate intense extratropical cyclones in the northern hemisphere
27. UVic, Applying machine learning methods to the environmental sciences—opportunities and pitfalls
28. UVic, Challenges in continental-domain hydrologic modelling
29. UVic, PCIC, PICS, Coupling ice sheets into climate models for self consistent sea level projections: progress and challenges
30. UVic, The role of complex modelling in climate science
31. UVic, Understanding and modelling weather and climate extremes: challenges and opportunities for science and society
32. UVic, What can we learn about temperature extremes from millennial-scale equilibrium climate simulations?
33. UVic, You want how many climate variables?! towards multivariate bias correction and downscaling to support climate-impact modelers
39. UVic, 2018 CIRC Forum: Cumulative impacts policy and practice in northern BC
40. UVic, Beyond Climate Impacts....to Inspiring Solutions. Film screening and panel discussion
41. UVic, Climate Policy in Europe
42. UVic, Climate Solutions Showcase
43. UVic, Conference: State-City Collaboration on Clean Energy Transformations
44. UVic, EnVision Conference 2019: Accelerating Energy System Transformation
45. UVic, Event attribution - are we doing it reliably?
46. UVic, Germany's energy transition and cities: Economic insights and good policy
47. UVic, Ideafest - Climate change, water and governance: Challenges and opportunities in our backyard, and for our Earth
48. UVic, Impacts and risks of 1.5 and 2 degrees of warming
49. UVic, Investing Powerfully: How can universities go carbon neutral?
50. UVic, Limiting Global Warming to 1.5 degrees: What Does it Take & is it Worth it?
51. UVic, Love & Turtles: Reflections on the Art, Change, and Creativity (ACC) research project, and initial analyses of exhibition-collected "pebbles" on climate change
52. UVic, Making the Links 2018: Climate Change, Community Health & Resilience
53. UVic, Perspectives from climate services in Europe

MULTI-FACETED

34. SFU, Advancing Collaborative Climate Adaptation in British Columbia
35. SFU, Climate Change Adaptation Governance in BC: Workshop Proceedings
36. SFU, Climate Futures
37. SFU, Degrees of Change Live Recording
38. SFU, To Catch a Falling Sky



MULTI-FACETED, CON'T

- 54. UVic, Solutions for 1.5 Degrees
- 55. UVic, The Science of 1.5 degrees
- 56. UVic, Who We Are with Elizabeth May
- 57. UVic, Why the Paris Agreement Negotiations Succeeded while Those in Copenhagen Failed
- 58. UVic, You, Me & the IPCC

OTHER

- 59. SFU, Social Innovation Certificate courses
- 60. SFU, Women's Participation and Leadership in Climate Solutions
- 61. UVic, The Big Melt? Canada's Interests in a Changing Arctic

PLANNING

- 62. UVic, BC Advanced Conservation and Efficiency (BC ACE) Discussion with Climate Scientist – Trevor Murdock
- 63. UVic, British Columbia's Climate Plan and the Urban Opportunity
- 64. Restoration
- 65. UVic, ER338A: Special Topics in Environmental Restoration: Climate Change in Ecological Restoration
- 66. UVic, ER502: Ecosystem Design through Propagation of Native Plants
- 67. UVic, ERR501: Design Principles for Natural Processes
- 68. UVic, Green Shores Training Program: Level 1 & 2 Workshop

SPECIES

- 69. UVic, The Future of Fishes and Fisheries in the Changing Ocean

URBAN

- 70. SFU, Prof, ACT, Climate Change in the Urban Environment: Essential Steps to Enabling Resiliency
- 71. SFU, Community Capacity Building Certificate
- 72. SFU, Natural Assets and Climate Change Resiliency
- 73. SFU, NGTC101: Next-Generation Cities and Transportation
- 74. SFU, Urban Design Certificate courses
- 75. UBC, One Day at UBC: Cities to the Rescue-Urban Environmental Policies and Their Role in Global Climate Policy
- 76. UVic, Resilient Cities: An Integrated Economic Approach to Natural Hazard Risk Mitigation

WATER

- 77. SFU, North Shore Rain Garden Project
- 78. UVic, PCIC, PICS, Disentangling the impacts of climate change and human interventions on the hydrology of key Canadian watersheds
- 79. UVic, Humans and the Water Cycle
- 80. UVic, Seasonal glacier mass balance from airborne laser altimetry, Columbia River Basin, Canada
- 81. UVic, Water, Peace and Global Security: Canada's Place in a Changing water World
- 82. Wildfire
- 83. UVic, Are recent extreme fire seasons in BC attributable to human-induced climate change?
- 84. UVic, ER338B: Special Topics in Environmental Restoration: Fire Ecology



7.0 Additional Potentially Relevant Courses

This is a list of courses that did not include any specific mention of climate adaptation in their calendar description or title but that may either include adaptation content or that might be modified to include because of their topic relevance to climate adaptation. This is a list of courses that did not include any specific mention of climate adaptation in their calendar description or title but that may either include adaptation content or that might be modified to include because of their topic relevance to climate adaptation.

- Air Pollution Control (EGBC, November 15, 2019)
- Introduction to Stormwater Management and Modelling (EGBC, October 2, 2018)
- Hydrotechnical Design of Hydropower Facilities (EGBC, July 4, 2018, also link from ASTTBC)
- City of Campbell River's Water Supply Project (EGBC, May 24, 2018)
- Applied Soil Mechanics and Shoring Design (EGBC, May 7, 2018, also link from ASTTBC)
- Advanced Modeling and Water Master Planning (EGBC, March 6, 2018)
- Effective Risk Management Tools and Techniques (EGBC, February 28)
- Hands-on Physical Modeling of Hydrotechnical Phenomena (EGBC, February 15, 2018)
- Site Characterization for Mine Waste Embankments in BC Glaciated Valleys (EGBC, February 13, 2018)
- Hydrotechnical Design of Tunnels (EGBC, September 26-27, 2019)
- Hands-on Physical Modelling of Hydrotechnical Phenomena (EGBC, November 21, 2019)
- Hydraulic Modeling of Water Distribution Systems (EGBC, January 26, 2018, also link from ASTTBC)
- BCIT - Solar Electric Design (ASTTBC, Feb 22-23, 2019)
- EPIC - Advanced Permeable Pavement Design and Construction (ASTTBC, Feb 25, 2019)
- BCIT - Residential Energy Efficiency (ASTTBC, March 2-3, 2019)
- Stardust Solar Presents - Solar Installation Training (ASTTBC, March 2-6, 2019)
- EPIC Presents - Planning, Design, Construction, Repair and Renovation of Docks and Marinas (ASTTBC, March 4-5, 2019)
- 2D River Flow Modelling: An Introduction Using RAS2D (tool) (ASTTBC link to EGBC, March 11, 2019)
- SFU Continuing Studies CITY258 - Planning and Designing Healthy Communities (ASTTBC, March 15, 2019)
- EPIC Presents - Design and Analysis of Stormwater Management Ponds (ASTTBC, April 15-17, 2019)
- Hands-on Physical Modelling of Hydrotechnical

- Phenomena (ASTTBC link to EGBC, November 21, 2019)
- Sediment Engineering for River and Coastal Projects (ASTTBC link to EGBC, May 23, 2019)
 - Evolution of Resource Management – Lecture #3 in Ag/Bio Series (BCIA, CCI branch, February 28, 2019; PDH 1 hr)
 - Innovations in Okanagan LiDAR, and why is it so important? (BCIA link to Okanagan Basin Water Board & Okanagan Collaborative Conservation Program, March 4, 2019)
 - Rocky Mountain Trench Ecosystem Restoration Program (BCIA, Kootenay Conservation Program Webinar Series, March 7, 2019, PDH 1 hr)
 - Towards Understanding the Influence of Headwater Catchments on Water Availability in the Athabasca River Basin (BCIA, part of Wetland BMP Knowledge Exchange monthly webinar series, March 21, 2019)
 - What's the Buzz? Understanding the Status of Native Bees & How to Help (BCIA, UBCO, April 16, 2019)
 - A Case for Evidence-Based Pollinator Conservation Management (BCIA, UBCO/UBC, April 17, 2019)
 - How to Work With Local Governments to Get Scientific Findings Into Policy (BCIA, UBCO, April 17, 2019)
 - Wetlandkeepers Workshop *Kamloops* (BC Wildlife Federation, BCIA, June 14, 2019)
 - Bumble Bee Biodiversity, Ecology, and Identification (Columbia Mountain Institute of Applied Ecology, BCIA, CAB, June 17, 2019)
 - Wetlandkeepers Workshop *Rossland* (BC Wildlife Federation, BCIA, July 12, 2019)
 - Wetlandkeepers Workshop *Cawston* (BC Wildlife Federation, BCIA, July 17, 2019)
 - 2019 Wetlands Institute Workshop *Southern Kootenays* (BC Wildlife Federation, BCIA, September 30, 2019)
 - Ecological Landscape Design II (BCSLA, Gaia College, March 16, 2019)
 - Park Management: A Tool for Creating Healthy and Vibrant Communities for All (BCSLA, BC Recreation and Parks Association, February 26, 2019)
 - LEED Green Associate Training BC (BCSLA, UBC/UBCO, March 2, 4, 2019)
 - Ecological Plant Knowledge (BCSLA, Gaia College, March 4, 2019)
 - What's Beneath the Surface? Insights into Collaborative Water Monitoring Data and Decision-making (CAB, Polis Project, March 7, 2019)
 - Species at Risk – At the Rural/Urban Interface (CAB, South Coast Conservation Program, March 14, 2019)
 - Wetland Best Management Practices Knowledge Exchange (CAB, Ducks Unlimited Canada monthly webinar series, March 21, 2019)
 - Fish Habitat Restoration (CAB, Natural Resources Training Group, April 2-3, 2019)
 - Environmental Monitoring for Construction Projects (CAB, VIU Natural Resources Extension Program NREN 001, April 3-5, 2019; July 23-25, 2019)
 - Bat Matters: Chiroptera Conference (CAB, Bat Education Ecological Protection Society, April 12-13, 2019)



- Critical Habitat Screening Workshop (CAB, ECCC, April 17, 2019)
- BC Wildlife Federation 63rd AGM & Convention, theme Predator-Prey Dynamics (CAB, BCWF, May 8-11, 2019)
- 4th Indigenous Resource Opportunities Conference (CAB, May 23, 2019)
- Erosion & Sediment Control (CAB, VIU Natural Resources Extension Program NREN 002, May 22-24, 2019; August 20-22, 2019)
- Water Quality Monitoring: Freshwater Sampling and Design (CAB, VIU Natural Resources Extension Program NRWQ 002, June 4-6, 2019)
- Level 1: Introduction to Basic Fish Health (CAB, VIU Natural Resources Extension Program NRFH 001, June 10-14, 2019)
- Bumble Bee Biodiversity, Ecology, and Identification (CAB, Okanagan College and Columbia Mountains Institute of Applied Ecology, June 17-18, 2019)
- Level 2: Practical Fish Health Techniques for Aquaculture & Fisheries Ecology (CAB, VIU Natural Resources Extension Program, June 17-21, 2019)
- Environmental Technician Certificate Program (CAB, VIU Natural Resources Extension Program, May 27-June 28, 2019)
- Rural Design Workshop (PIBC, November 28, 2018)
- Planning and Designing Healthy Communities (PIBC, SFU CITY258, March 15-16, 2019)
- Building Smart Cities (PIBC, Urban Development Institute, March 12, 2019)
- IAP2 Foundations in Public Participation in Vancouver (Techniques) (PIBC, Canadian Trainers Collective, March 14-15, 2019; March 11-14, 2019, etc.)
- Urban Design 787 – Ecological Planning (SFU, PIBC link, April 10-11, 2019)
- Community Data Science: Theory and Practice (PIBC, SFU Continuing Studies, online September 2019)
- Fraser River Dialogue Series – e.g., Fraser River Land Use (PIBC, Fraser River Discovery Centre, November 6, 2018)
- Building Happier, Healthier Cities (PIBC, UBC Campus and Community Planning, October 4, 2018)
- Shaping Vancouver 2018: Change in Living Communities – False Creek South (PIBC, Heritage Vancouver, October 11, 2018)
- Vernon Planning & Development Update: Now and Into the Future (PIBC, Real Estate Institute of BC, September 20, 2018)
- Surrey – Today and Into the Future (PIBC, Real Estate Institute of BC, September 13, 2018)
- SFU-Next Generation Transportation Certificate (info session) (PIBC, SFU Continuing Studies, City Program, August 17, 2018)
- Built Green Technical Workshop: Building Envelope, Mechanical Heating Systems, and HRVs (PIBC, Built Green Canada, July 17, 2018)
- NW Food Security Forum (PIBC, NW Food Security Partnership, May 17, 2018)

